Weekly Summary Report
USEPA Oversight, Sauget Area 2, Sauget, IL
WA No. 224-RXBF-05XX / Contract No. 68-W6-0025

Week Ending Friday June 11, 2004

This report summarizes the Interim Remedial Action (IRA) work conducted by Solutia and its contractors from June 7 through June 11, 2004 at Site R, Sauget Area 2. The current IRA fieldwork consists of site preparation, barrier wall trenching, and backfilling.

Contractors Onsite

Inquip Associates Inc. (barrier wall construction contractor)
Odesco Industry Services (subcontractor to Inquip for sediment cleanup)
PSI (geotechnical testing subcontractor)
Pangea (subcontractor to Inquip for site maintenance and preparation)
URS (primary consultant for Solutia)
Zahner Survey (surveying subcontractor to Inquip)

Work Performed This Week

Work at the site continued with a crew of Inquip operators and laborers performing site and trench maintenance activities.

Along the east-west leg of the trench at the southernmost section of the barrier wall, approximately 40 feet of trench was excavated by the hydraulic and mechanical clamshell rigs to total depth. The hydraulic and mechanical clamshells excavated on approximately two days and three days, respectively, during the week. Maintenance and repairs, including changing the cables, was performed on the rigs during downtime.

Both clamshell rigs were used to clean the trench bottom and to excavate the trench to a greater depth. With the exception of Friday, only one clamshell was operating at any given time because there was insufficient work space for two rigs to operate in the southern portion of the barrier wall alignment.

Backfill was placed into the trench on three days during the week, with the daylighted backfill closing the north end of the open trench to station 17+00.

The 1266 trackhoe was not utilized during the week.

Groundwater Migration Control System (GMCS)

The river elevations generally decreased during the week, from 407.1 feet above sea level (amsl) on June 5, to 403.7 feet amsl on June 11, 2004. Correspondingly, the combined flow rate of the extraction well system increased from 300 gallons per minute (gpm) on June 5, to 460 gpm on June 11.

The eight barrier wall piezometers, with four inside and four outside the barrier wall alignment, continued to monitor the groundwater water elevations adjacent to the barrier

wall alignment. Table 1 shows the river and piezometer water elevations measured on June 11, 2004 (2:00 PM). Water levels measured inside the barrier wall alignment, with the exception of piezometer pair of P1S and P1N, were about two feet lower than those measured outside the barrier wall alignment. For the piezometer pair of P1S and P1N, water levels at P1S (inside of the barrier wall) were generally within two feet higher than those at P1N (outside of the barrier wall). Nevertheless, the river elevations were significantly higher than those measured at all eight piezometers throughout the week, indicating an inward groundwater flow, from the river toward Site R.

TABLE 1
River and Piezometer Water Elevations – June 11, 2004 (2:00 PM)

	Elevation (ft above mean sea level)
River Level	403.70
Piezometer 1S – inside wall (northern-most pair)	398.20
Piezometer 1N – outside wall (northern-most pair)	397.04
Piezometer 2E – inside wall (north-central pair)	397.21
Piezometer 2W – outside wall (north-central pair)	399.34
Piezometer 3E – inside wall (south-central pair)	396.48
Piezometer 3W – outside wall (south-central pair)	398.82
Piezometer 4E – inside wall (southern-most pair)	395.72
Piezometer 4W – outside wall (southern-most pair)	396.97

Stormwater

No stormwater activities occurred during the week. However, Odesco Environmental Services removed approximately 100,000 gallons of deposited sediment from the North Modutank using a vacuum truck. The sediment was transferred to the temporary stockpile area in the exclusion zone.

Slurry Mixing

Approximately 36.5 tons of bentonite gel was used to mix fresh slurry on three days of the week. The slurry, when pumped from the south holding pond to the open trench near station 14+90, was tested frequently to assess its viscosity and adjusted with a blending pump using water from the fire hydrant, as necessary. The viscosity of the slurry was measured using a Marsh funnel, with results generally meeting the specification.

Spoils Handling

During the week, spoils were transferred from the excavation area along the southern leg of the barrier wall alignment to the temporary stockpile area on top of the landfill.

Barrier Wall Construction

Inquip continued excavation of the trench along the south arm of the barrier wall alignment with the hydraulic and mechanical clamshell rigs used for both trench bottom cleaning and

deeper excavation. The Koehring 1266 has been moved to the north-central portion of Site R, near station 26+00. The 1266 hoe is scheduled to start excavating in this area in the following week.

As of June 11, the open trench was approximately 1,200 feet in length along the barrier wall alignment from station 5+00 (the terminating point of the southern leg of the barrier wall) to station 17+00 (please refer to Solutia's map for locations).

Fresh bentonite slurry was pumped into the open trench as needed to keep the excavation open on three days of the week. Slurry samples were collected from the top and the bottom of the trench daily; fresh and trench slurry samples were tested for viscosity, density (unit weight), filtrate loss, pH and sand content during the week. All the results either met the specifications or satisfied the quality targets. The mechanical desander operated periodically throughout the week, however the intake valve frequently became plugged and the desander was stopped and cleaned.

During the week, Inquip mixed and placed into the trench approximately 780 cubic yards of backfill materials. Backfill operations took place on three days during the week. The backfill composition varied during the week. On June 9, the backfill was composed of spoils with the addition of approximately two percent of bentonite in dry weight. The remainder of the week, five percent of clean clay soil was additionally included in the backfill mix.

The backfill was tested by PSI for slump, unit weight and moisture content. The unit weight of backfill placed during the week measured between 121 and 127.5 pounds per cubic foot (pcf). Slump test results were between 4 to 4.5 inches, and the moisture content results ranged from 18.5 to 20 percent. All test results met the minimum requirements. Tests on the backfill mixture to be conducted offsite included permeability and gradation.

The bottom of the trench at and ahead of the backfill toe was cleaned using the clamshell rig prior to the backfill placement. Depth-to-bottom measurements were made every 10 linear feet of trench to ensure the bottom of the trench was at a consistent depth and on top of bedrock. These depth measurements were performed with the clamshell rig's instrumentation and were manually confirmed at two locations with the downrigger (plumbob on wire). On a daily basis, two samples were collected by PSI with a clam sampler from the top of the placed backfill in the trench prior to backfill placement. These samples were visually checked to ensure that the backfill surface in the trench was clean and free of any sand.

During the week, the trench depths were measured each day, either in the morning or at the end of the day. The trench depth measurements were made every 100 linear feet of trench, with 20-foot spacing of measurements on either side of the backfill toe. The trench depth measurements from the afternoon of June 11, after backfill was placed, are shown in Table 2. The trench profile is depicted in Graph 1 and is compared with the trench depth profile measured on June 4. Graph 2 shows the overall progress of the barrier wall construction.

Other Activities

Inquip continued to build the work platform near the northwest corner of the barrier wall alignment, extending along the northern leg. The work platform is constructed of gravel and finer rock aggregates and is compacted to form a base upon which the excavation equipment will operate.

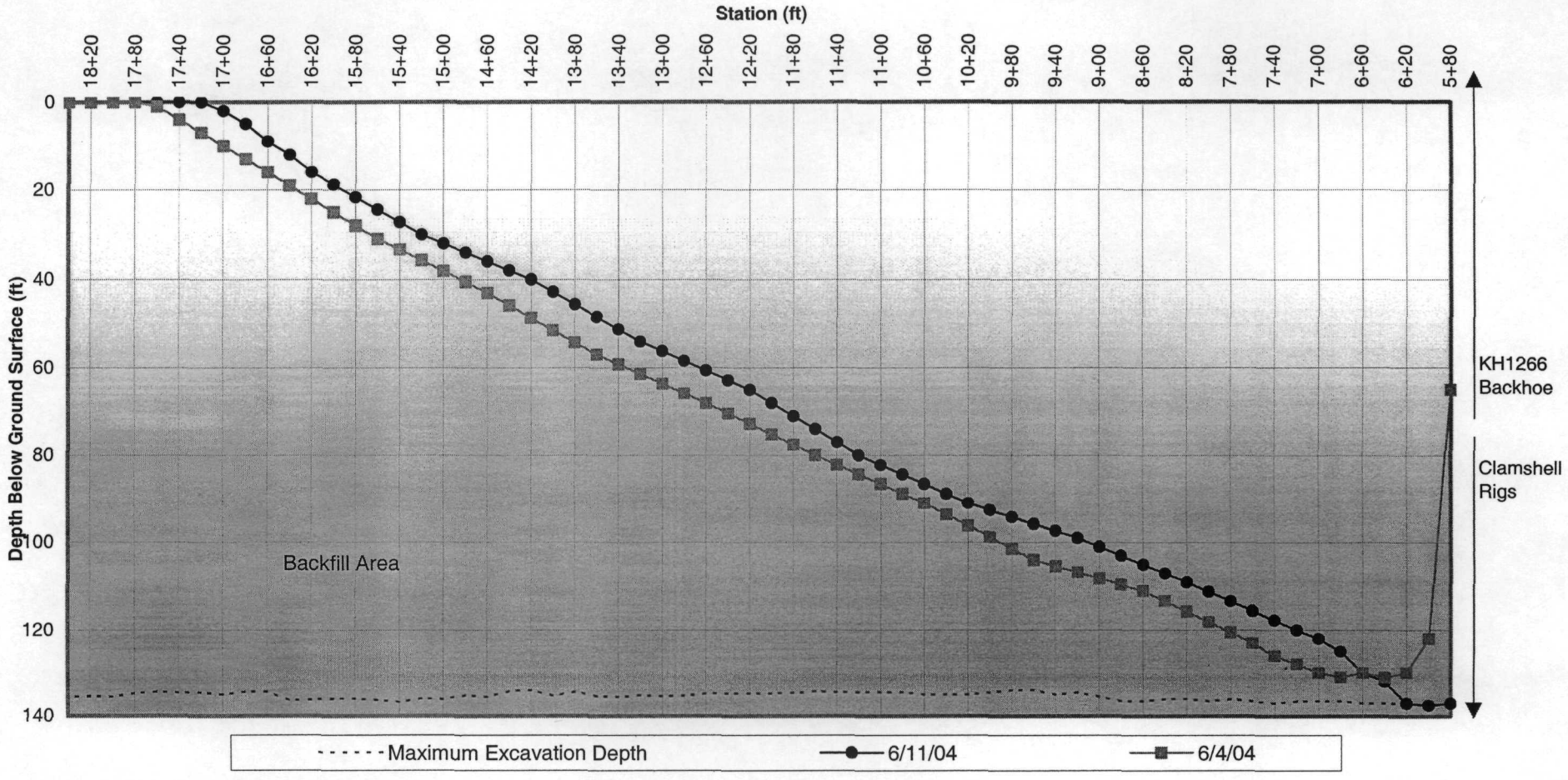
Pangea continued to prepare the northern leg of the barrier wall footprint for excavation activities. A stormwater culvert that intersected the barrier wall alignment near station 25+90 was removed during the week.

Zahner surveyors were onsite this week to survey the South end of trench from station 8+80 to 5+00 and to place elevation hubs along the survey area. The northern leg of the barrier wall alignment was also surveyed to assist preparation activities prior to excavation work in this area.

TABLE 2
Trench Profile (Downrigger Measurements) for the Barrier Wall Trench – June 11, 2004 (PM)

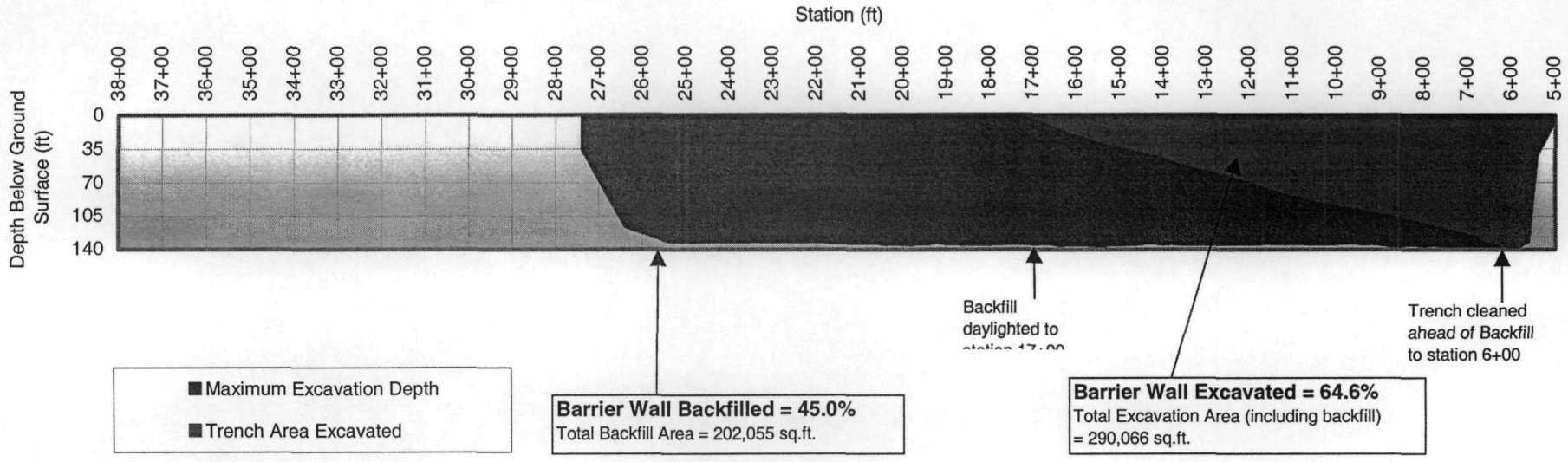
Station ID	Depth to bottom (ft below ground surface)
5+00	6
5+20	24
5+40	42
5+60	132
5+80	137
6+00	138
6+20	137
6+40	132
6+60	130
6+80	125
7+00	122
7+20	120
8+20	109
9+20	99
10+20	91
11+20	80
12+20	65
13+20	54
14+20	40
15+20	30
16+20	16
17+00	2

Graph 1 - Weekly Barrier Wall Construction Progress
June 7 through June 11, 2004



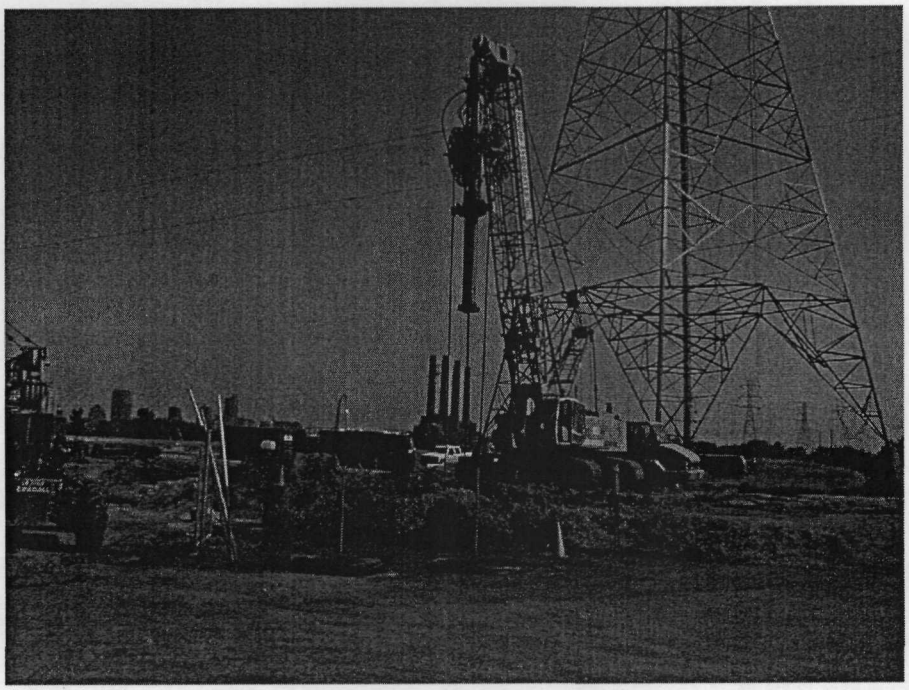
Note: Data plotted for the week through AM measurements on 6-4-04 and PM measurements on 6-11-04.
Some data points are interpolated between the available data points where trench depth measurements were read.

Graph 2 - Barrier Wall Construction Progress by June 11, 2004 (PM)



Note: Data plotted for week through PM measurements on 6-11-04.

Photos from June 7 through June 11, 2004:



The hydraulic clamshell, Liebherr 853, excavating near station 5+40 (June 11, 2004).

The desander was operated periodically throughout the week, frequent declogging of filters was required (June 11, 2004).

English, Chris/STL

From: English, Chris/STL

Sent: June 14, 2004 5:08 PM

To: 'Nabil Fayoumi (Fayoumi.Nabil@epamail.epa.gov)'; 'Sandra.Bron@epa.state.il.us'

Cc: Morris, Clair/STL; Behnke, Bryce/STL; Schneider, Jim/DEN; 'Bruce Yare '; 'Richard Ashley '; 'Glen Kurowski '; 'Ken Bardo '; 'Richard Williams'; 'Steve Smith'; Li, Ning/STL

Subject: Sauget Area 2 - Weekly Oversight Report for the Week Ending June 11, 2004

Nabil and Sandy,

Please find attached a summary report for the week ending June 11, 2004. Please let us know if you have any questions.

Thanks,

Chris

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